

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/2/08 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: In line 26 of page 19 of the submitted specification, or paragraph [0091] of the published specification, the paper width sensor is identified as 34, but it should be 54. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krieg et al. (US 4265556) in view of Oda (US 5277506).

5. Regarding claim 1, Krieg et al. disclose "a controller (motor control of Fig 1) that causes a sensor (54 of Fig 1 and 2) to detect an edge that is guided by said fixed guide

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(both the left and right edges are detected, see col 4 ln 15-23, col 5 ln 62-67, col 6 ln 4-9), in said scanning direction (see movement arrow 30 for carrier 14 of Fig 1), of said medium to be printed (22 of Fig 1 and 2).” Thus Krieg et al. meet the claimed invention except “a fixed guide; [and] a movable guide that is movable in said scanning direction.” The last limitation of claim 1 is essentially a method limitation or statement of intended or desired use. Thus, this limitation as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647. See MPEP § 2114. Regardless, Krieg et al. disclose that the “print start position is determined based on a result of detecting said edge of another medium to be printed (see col 6 ln 40-46, 51-58, col 7 ln 29-34, col 3 ln 22-23).”

6. Oda teaches “a fixed guide (6 of Figs 2 and 5); [and] a movable guide that is movable in said scanning direction (7 of Figs 2 and 5).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a fixed guide and a movable guide in the ink jet printer of Krieg et al., as taught by Oda, to achieve the predictable results of guiding the paper in a sturdier manner to reduce or eliminate the possibility of cockling or misalignment of the paper during printing.

7. Regarding claims 2, 4, and 6-11, the limitations recited in these claims are essentially method limitations or statements of intended or desired use. Thus, these claims as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181

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USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

8. Furthermore, Krieg et al. disclose registers 100 and 102 of Fig 3a which are capable of storing the claimed information and reading out or obtaining information according to the system of Fig 3a. Krieg et al. also disclose information about a blank space to be formed (margins in col 6 ln 51-58) and information about the paper width (col 6 ln 40-46).

9. Regarding claim 3, Krieg et al. disclose “said sensor (54 of Fig 1) is provided on a carriage (14 of Fig 1) that is movable in said scanning direction (see arrow 30 of Fig 1).”

10. Regarding claim 5, Krieg et al. disclose “said position of said carriage is detected using an encoder (col 3 ln 27-44).”

11. Regarding claim 12, Krieg et al. disclose “a controller (motor control of Fig 1) that causes a sensor (54 of Fig 1 and 2) to detect an edge that is guided by said fixed guide (both the left and right edges are detected, see col 4 ln 15-23, col 5 ln 62-67, col 6 ln 4-9), in said scanning direction (see movement arrow 30 for carrier 14 of Fig 1), of said

medium to be printed (22 of Fig 1 and 2)... said sensor (54 of Fig 1) is provided on a carriage (14 of Fig 1) that is movable in said scanning direction (see arrow 30 of Fig 1)...a position of said carriage is detected using an encoder (col 3 ln 27-44),” and registers 100 and 102 as storage devices. Thus Krieg et al. meet the claimed invention except “a fixed guide; [and] a movable guide that is movable in said scanning direction.” The remaining limitations of claim 12 are essentially method limitations or statements of intended or desired use. Thus, these limitations as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647. See MPEP § 2114. Regardless, Krieg et al. disclose that the “print start position is determined based on...information about said position of said carriage (col 4 ln 43-49), and at least one of said information about the width of said medium to be printed (col 6 ln 40-46) and said information about the blank space that is to be formed on said medium to be printed (col 6 ln 51-58).

12. Oda teaches “a fixed guide (6 of Figs 2 and 5); [and] a movable guide that is movable in said scanning direction (7 of Figs 2 and 5).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a fixed guide and a movable guide in the ink jet printer of Krieg et al., as taught by Oda, to achieve the predictable results of guiding the paper in a sturdier manner to reduce or eliminate the possibility of cockling or misalignment of the paper during printing.

13. Regarding claim 13, Krieg et al. disclose “detecting an edge that is guided by said fixed guide (both the left and right edges are detected, see col 4 ln 15-23, col 5 ln 62-67, col 6 ln 4-9), in said scanning direction (see movement arrow 30 for carrier 14 of Fig 1), of said medium to be printed (22 of Fig 1 and 2); and determining said print start position based on a result of detecting said edge of another medium to be printed (see col 6 ln 40-46, 51-58, col 7 ln 29-34, col 3 ln 22-23).” Thus Krieg et al. meet the claimed invention except “moving a movable guide in said scanning direction; ...[and] a fixed guide.”

14. Oda teaches “moving a movable guide in said scanning direction (see 7 of Figs 2 and 5); ...[and] a fixed guide (see 6 of Figs 2 and 5).” Like Krieg, Oda also discloses determining said print start position based on a result of detecting an edge of another medium to be printed (col 5 ln 25-29, ln 50-64). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a fixed guide and a movable guide in the ink jet printer of Krieg et al., as taught by Oda, to achieve the predictable results of adjusting the guide to a suitable position for the paper and guiding the paper in a sturdier manner to reduce or eliminate the possibility of cockling or misalignment of the paper during printing.

15. Regarding claim 14, Krieg et al. disclose “a step of preparing a printing apparatus (col 2 ln 23-28)...a step of detecting an edge (the edge guided by the fixed guide) (both the left and right edges are detected, see col 4 ln 15-23, col 5 ln 62-67, col 6 ln 4-9), in said scanning direction(see movement arrow 30 for carrier 14 of Fig 1), of another medium to be printed (22 of Fig 1 and 2)...a step of determining a print start position

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based on a result of detecting said edge of said other medium to be printed (see col 6 ln 40-46, 51-58, col 7 ln 29-34, col 3 ln 22-23); and a step of ejecting ink droplets (col 2 ln 64-68).” Thus Krieg et al. meet the claimed invention except “the edge being guided by said fixed guide” and does not explicitly state (although it could be implied) ejecting the ink droplets “from the determined print start position to print on a medium to be printed that is different from said other medium to be printed.” Please note that for this examination, preparing the printing apparatus has been interpreted to mean readying the apparatus for printing. If applicant intends the limitation to be interpreted as preparing the printing apparatus by assembling a fixed guide and a movable guide to the apparatus, then the claim would not be supported by the specification, since it does not appear that a fixed guide and a movable guide are added or assembled to the printing apparatus for each successive printing operation.

16. Oda teaches “the edge being guided by said fixed guide (see 6 of Figs 2 and 5)” and ejecting the ink droplets “from the determined print start position to print on a medium to be printed that is different from said other medium to be printed (col 5 ln 58-65).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use a fixed guide and eject the ink droplets as claimed above in the method of Krieg et al. to achieve the predictable results of guiding the paper in a sturdier manner to reduce or eliminate the possibility of cockling or misalignment of the paper during printing and using the determined print start position to achieve more reliable and accurate ejection of droplets on a given medium.

Response to Arguments

17. Applicant's arguments with respect to claims 1-10 and 12-14, regarding having no valid reason to combine the references due to Oda teaching away from the proposed combination and the contribution of Oda being destroyed, have been considered but are moot in view of the new ground(s) of rejection, in which Krieg et al. disclose the substantive apparatus and method as set forth above and Oda teaches fixed and movable guides. Examiner further notes that claim 11 was not addressed in applicant's response, resulting in a reply that is not fully responsive. However, examiner chose to forego a non-responsive amendment reply in order to advance prosecution without a further delay.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Goldberg whose telephone number is (571)272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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